Avaya 1010/1020 Installation Guide

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Preparing for Installation

As you prepare to install Avaya 1010/1020, consider the physical conditions of the room, compatibility with displays, and your network configuration and settings. Avaya recommends you collect your network settings and system identification information before you begin installation. Refer to “Initial Configuration” on page 6.

Room Configuration

The size, shape, layout, and occupancy of the room dictate where you place your video conferencing components. For example, in a small office installation, Avaya Video Camera 100 can be placed at one end or corner of the room, as its beam forming microphone array cancels echo from wall reflections behind it and detects clear sound up to 2.7 meters (9 feet) in front of it. However, in a multi-user conference room, an Avaya Video MicPod 1000 should be placed in the middle of the participants as its sound detection pattern is omnidirectional with a radius of 3 meters (10 feet).

Warning: Avoid routing cables from the codec across foot-traffic areas as tripping on the cables can cause both personal injury and permanent damage to the connectors in the cables and the codec itself. If cables must cross foot-traffic areas, use some form of cable management system or strategy to lessen the possibility of tripping.

The lighting in your environment affects image quality. The optimal lighting for Avaya systems is 300 to 500 LUX. If light levels are too low, consider adding artificial lighting. Indirect light from shaded sources or reflected light from pale walls often produces excellent results. Avoid the following:

- direct sunlight on the subject matter, the background, or the camera lens
- direct illumination of the subject matter and camera lens
- colored lighting
- harsh side lighting or strong light from above

Consult your administrator for specific lighting requirements for your environment.

Supported Display Types and Resolutions

Avaya 1010/1020 can connect to 720p HD displays through an HDMI cable. Supported display resolutions include the following:

- 720p
- 768p

Note: Avaya 1010/1020 automatically sets the **Display Resolution** preference in **Administrator Preferences : Appearance : Displays** to *Auto* if you select an option for this preference that is not supported by the connected display.

Placement Behind a Firewall

Avaya recommends you place your system behind a firewall and block, at minimum, the following ports:

- 22 (ssh)
- 23 (telnet)
- 80 (http)
- 443 (https)

If you require these ports to remain open, ensure that you change the default administrator and command line interface passwords to be very secure. For information about changing the default administrator password, refer to the *Avaya 1010/1020 User Guide*.

You can also disable ssh and web access on the system by configuring preferences in the user interface. By default, telnet access is disabled. For more information about remote access, refer to the *Avaya 1010/1020 User Guide*.

Network Bandwidth

Poor audio and video quality may result from insufficient bandwidth on your network. Avaya recommends that your network be capable of at least 1 Mb/s for a high definition video call. During video calls with lower bandwidths, Avaya systems automatically select the best resolution that can be achieved with the available bandwidth.

Initial Configuration

During the installation process, Avaya 1010/1020 prompts you to configure it for the first time. Avaya recommends that you gather all the necessary information prior to installation. The following sections provide guidelines for collecting, and a means of recording, this data. You may need to consult your network administrator for network settings and system identification information.

Note: The initial configuration screens also appear when you perform a system reset. For more information about restoring default settings, refer to the *Avaya 1010/1020 User Guide*.

Language

Select the language to display in the user interface. The default is English.

Administrator and User Passwords

Some functions and preferences available from the user interface are accessible only to administrative users with a password. For security reasons, Avaya recommends that you change the default administrator password (1 2 3 4) during the initial configuration.

Optionally, you can set a user password to control access to user preferences that enable the user to do the following:

- Change the appearance of the user interface.
- Specify how calls are answered.
- Change camera settings.
- Configure audio settings.
- Reboot the system.

The administrator and user passwords can contain any combination of the numbers 0-9 and the symbols * (star) and # (pound) up to 16 characters in length.

Note: If you set a user password, you can also use the administrator password to access user preferences.

Administrator Password: _____

User Password: _____

System Identification

Information that identifies the system to users appears throughout the user interface.

Set the **Location** preference to your location. The default is the United States. The **Time Zone** preference sets the system time that appears in the status bar on the main page of the user interface. It defaults to Greenwich Mean Time. You must set this preference even if you specify an NTP server during the initial configuration (refer to “Network Settings” on page 7).

The **System Name**, **Video Number**, and **Voice Number** appear in the user interface on the main screen. The system name may also appear in the local and corporate directories. Avaya recommends that you change the default system name to one that meaningfully identifies the system to your users.

System Name: (to identify this installation in the network): _____

Video Number: _____

Voice Number: _____

Network Settings

By default, DHCP is enabled on Avaya systems. If you choose *Disabled* for the **DHCP** preference, you must enter an **IP address** (the locally configured IP address if not assigned by a DHCP server), **Subnet Mask** (used to partition the IP address into a network and host identifier), and **Default Gateway** (the IP address of the default gateway the system uses).

IP Address: _____

Subnet Mask: _____

Default GateWay: _____

You can enter the **Hostname** of the system. If you do not have a DHCP server that automatically sets a DNS server, you can enter the IP addresses to configure **DNS Servers**. You can also define the domain names to search when resolving hostnames. DNS translates names of network nodes into addresses; specify this preference to use DNS to resolve the hostnames of devices to IP addresses.

Hostname: _____

DNS Servers: _____

Name Search Domains: _____

If you choose an option other than *Auto* (the default) for the **Network Speed** preference, ensure that the option matches the speed and duplex configured on your network switch.

Network Speed: _____ Network Duplex: _____

You can enter the hostname or IP address of a Network Time Protocol (NTP) server to set the system date and time automatically. The Avaya system ignores the value you specify for the NTP Server Hostname if the **DHCP** preference is set to *Enabled* and the DHCP server can pass an NTP server address to the Avaya system.

Network Time Protocol (NTP): _____

Audio Preferences

The default for **Active Microphone** is *Auto*. The system detects attached audio input devices and makes one of them the active microphone in this order: microphone in, camera 1.

To set the audio level for the active microphone, select **Active Microphone Volume** and press **OK** on the Avaya remote control. An audio meter appears. The audio meter is calibrated in decibels (dB) below digital full scale on the transmitted voice. The maximum level is 0 dB.

You can also test the primary output speakers for the appropriate audio level or to ensure they are working properly. Select *Auto* for **Primary Audio Output Test** to cycle through a test on your available speakers. The test continues until you select *Off*.

Avaya 1010/1020 Components

Your Avaya 1010/1020 package contains the following components:

- One of the following cameras and cables:
  - Avaya Video Camera 100 and a 2.9 M (9.5 ft) cable. (Contact Avaya or your Avaya Partner for optional 7.5 M (24.6 ft) or 15 M (49.2 ft) cables.)
  - Avaya Video Camera 150 and a 7.5 M (24.6 ft) cable. (Contact Avaya or your Avaya Partner for the optional 15 M (49.2 ft) cable.)

    The Avaya Video Camera 150 option requires the additional audio component:

    - Avaya Video MicPod 1000 (see “Optional Peripherals” on page 12 for the dual Avaya Video MicPod 1000 option)
- Avaya 1010/1020 codec
- Avaya Remote Control (including three AAA batteries)
- One ferrite
- Quick reference card
- Documentation CD

Installing Avaya 1010/1020

To install your Avaya 1010/1020 system, remove all components from the product packaging, including cables, and place them in the desired positions in your conference room or office.

Warning: Do not place anything on top of, below or adjacent to the codec that can obstruct air flow around the unit or generate heat. Doing so can cause the system to overheat and reboot. Prolonged overheating can result in damage to the codec. Ensure the room that houses the codec is properly ventilated and temperature controlled.

Refer to the Avaya quick reference card included with your system for a visual depiction of the proper setup. The numbers that appear on the quick reference card correspond to the following steps:

1. Open the battery compartment on the back side of the remote control.

   a. Before inserting the batteries, stretch each of the two straps across the outer battery slot closest to it.

   b. Insert the two outer batteries, negative end (-) first against the spring, then press the positive (+) end into place, trapping the cloth straps beneath the batteries.

   c. Lay the longer cloth strap over both batteries and insert the center battery's negative end against the spring first to trap the longer cloth strap beneath it. Then press the positive end of the battery into place.

   d. Lay the ends of the cloth straps over the center battery and install the cover.

2. Complete one of the following options to install the camera and audio components:

   a. To install Avaya Video Camera 100 as both your camera and audio component, insert the camera cable into the port on the rear of the camera and plug the opposite end into the port marked with the camera symbol on the back of the codec.

   b. To install Avaya Video Camera 150 as your camera component and Avaya Video MicPod 1000 as your audio input device, complete the following steps:

      - Insert the camera cable into the port on the rear of the Avaya Video Camera 150 and plug the opposite end into the port marked with the camera symbol on the back of the codec.
      - Insert the end of the cable from the Avaya Video MicPod 1000 into the microphone port marked with the microphone symbol on the back of the codec. (Refer to "Optional Peripherals" on page 12 for the dual Avaya Video MicPod 1000 option.)

   Warning: Tripping on the Avaya Video MicPod 1000 cord can cause personal injury as well as permanent damage to the Avaya Video MicPod 1000 cord connector and the connector in the codec. Avaya recommends that you use the cable strain relief clip included in the Avaya Video MicPod 1000 product box as described in "Attaching the Avaya Video MicPod 1000 Strain Relief Clip" on page 13.

3. Insert the video display cable into the port on the rear of your display and the opposite end into the port marked with the HD display 1 symbol **HD** on the back of the codec. Insert the display power cord into a power outlet on the wall.

   Note: If you plan to use external speakers not built into the display, connect the speakers to the port marked with the line out symbol on the back of the codec.

4. Insert the network cable into the network port marked with the LAN symbol on the back of the codec. Attach the ferrite to the network cable within 10 centimeters (four inches) of the codec. Insert the opposite end of the network cable into a network port.

5. Insert the cord from the power adapter into the power outlet marked DC 19V on the back of the codec. Insert one end of the power cord into the power adapter and the opposite end into a power outlet on the wall.

   The Avaya system starts, illuminating a blue LED on the front of the codec. See “Status Icons” on page 16 for more information about the state of the system as it boots or as conditions change.

   The camera initializes the first time it is connected to a codec; this process may take several minutes.

   Warning: Do not disturb or disconnect the devices during this time as you may damage the system.

6. An **Initial Configuration** screen appears and prompts you to configure the system. Refer to “Initial Configuration” on page 6 and the information you collected there previously to guide you through your configuration choices. Use the arrow keys on the remote control to navigate the preferences that appear in the initial configuration screens. Icons and their descriptions that appear at the bottom of each screen correspond to keys on the remote control and indicate what operations are available for the screen or a selected object.

   If the initial configuration screen does not appear and the display is blank, refer to “Troubleshooting Installation Issues” on page 14.

   The bottom of the screen contains the system status bar and the navigation bar. The system status bar indicates system and network status. When the system is booting, status also appears at the top of the **REDIAL** list to indicate the current state of the system. See “Status Icons” on page 16 for an explanation of status icons you may encounter.

Locking the Avaya Codec

You can lock the Avaya codec with a secure loop to prevent physical removal of the device. For assistance, contact your Avaya Partner or Avaya Technical Services.

Optional Peripherals

You can connect the following optional peripherals to enhance your Avaya system:

Peripheral	Usage
Microphone in	For use with a single or dual Avaya Video MicPod 1000 configuration. In a single Avaya Video MicPod 1000 configuration, you can add an Avaya Video MicPod 1000 extension cable (15 meters, 49.2 feet) to the Avaya Video MicPod 1000. In a dual Avaya Video MicPod 1000 configuration, you use a combination of two Avaya Video MicPod 1000s, one splitter cable, and extension cables in large rooms to create wider coverage of audio input. Refer to “Configuring Dual Avaya Video MicPod 1000s” on page 12 for supported configurations.
Audio Out (Line Out)	For use with external line level output speakers that are not built into display 1 or with a headset (left plus right). **Warning**: Excessive sound pressure from earphones and headphones can cause hearing loss.
USB	Reserved for future use.

Configuring Dual Avaya Video MicPod 1000s

Using the splitter cable, you can connect a combination of extension cables and two Avaya Video MicPod 1000s to the single Avaya Video MicPod 1000 port on your Avaya codec for maximum omnidirectional audio coverage in large conference rooms.

Dual Avaya Video MicPod 1000 configurations are limited to two Avaya Video MicPod 1000s and one splitter cable. (You cannot use multiple splitters to connect to more than two Avaya Video MicPod 1000s.) However, you can use variations on three configurations of extension cables:

If you connect the male end of the splitter directly to the codec, you can use none, or one extension cable to connect an Avaya Video MicPod 1000 to each of the female ends of the splitter.

If you use one extension cable to connect the codec to the splitter, you can use none, or one extension cable to connect an Avaya Video MicPod 1000 to each of the female ends of the splitter.

If you use two extension cables to connect the codec to the splitter, you must connect both Avaya Video MicPod 1000s directly to the female ends of the splitter.

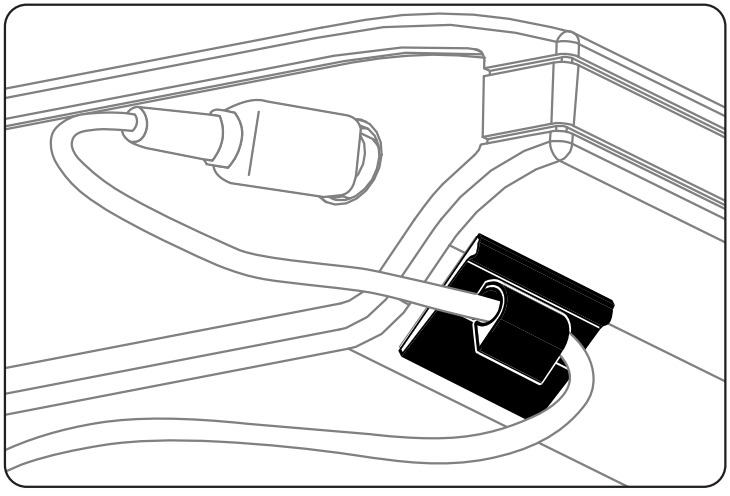
Warning: Tripping on the Avaya Video MicPod 1000 cord can cause personal injury as well as permanent damage to the Avaya Video MicPod 1000 cord or extension cable connector and the connector in the codec. Avaya recommends that you use the cable strain relief clip included in the Avaya Video MicPod 1000 product box as described in “Attaching the Avaya Video MicPod 1000 Strain Relief Clip” on page 13.

Avaya 1010/1020 detects any cable attached to its microphone input as an Avaya Video MicPod 1000. If an Avaya Video MicPod 1000 is not attached to the extension or splitter cable and the microphone input is selected as the active microphone, no audio is available. The No Active Microphone indicator does not appear in the status bar and the **Active Microphone** field in the **System Information** page reports *Microphone In* as the active microphone.

Attaching the Avaya Video MicPod 1000 Strain Relief Clip

If the Avaya Video MicPod 1000 is installed in an area where the cord could be pulled or tripped upon, Avaya recommends using the strain relief clip (included with your Avaya Video MicPod 1000) to reduce the chance of disconnecting or damaging the plug or Avaya 1010/1020. Avaya also recommends that you use some form of cable management system or strategy to lessen the possibility of tripping.

Before attaching the strain relief clip to the codec, ensure the codec surface is clean (free of dirt, dust oil, and other residues) and dry. The adhesive tape on the strain relief clip is intended for a single use. Attach the strain relief clip to the codec and route the Avaya Video MicPod 1000 cable through the strain relief clip as shown in the following illustration:



Post-Installation Configuration

Depending on your environment, you may need to make the following additional adjustments to the configuration of your Avaya 1010/1020 and your network before you can make a test call to verify your installation.

If your Avaya system communicates with other devices through a firewall, you must configure your firewall to allow incoming and outgoing traffic to the Avaya system through the reserved ports. Users placing calls through a firewall to systems with IP addresses may experience one-way audio or video if the firewall is not properly configured to allow video and audio traffic.

If you are using Session Initiation Protocol (SIP) servers in your environment to place calls using the SIP protocol, you must configure the SIP settings for Avaya 1010/1020.

For more information on configuring these preferences, refer to the appropriate section of the *Avaya 1010/1020 User Guide*.

Troubleshooting Installation Issues

Installation issues you may encounter with Avaya 1010/1020 system typically involve display output issues, improperly connected cables, or network bandwidth or connectivity. When investigating a system problem, first inspect all external cable connections. Ensure that connections are correct and secure, and that nothing is obstructing the cables. For more information about troubleshooting issues you may encounter with Avaya 1010/1020, refer to the *Avaya 1010/1020 User Guide*.

No Power

To troubleshoot a power problem, complete the following steps:

1. Disconnect the power supply unit (PSU) from the codec and the AC source.
2. Plug an appliance you know works into the AC source to determine if the source works.
3. If the AC source works, plug the PSU into the AC source, but do not connect the PSU to Avaya 1010/1020. If the green LED on the PSU illuminates, the PSU is probably good.
4. Connect the PSU to Avaya 1010/1020. If Avaya 1010/1020 fails to boot and the green LED dims, there may be a problem with the codec.

IP Address Displays Invalid Value

After you complete the initial configuration, if the IP address that appears at the top of the main screen displays an invalid value, one of the following conditions may exist:

Condition	Resolution
The unit is configured to obtain an address using DHCP and no DHCP server is available. **Note:** The DHCP client self-assigns an address in the 169.254 class B network and the red network symbol appears in the status bar on the main screen.	Verify that the unit is plugged into a network that has a DHCP server present.
Faulty Ethernet cable connection.	Replace the Ethernet cable with a high quality cable.
The unit is configured to use a static IP address, but no IP address has been entered.	Identify and enter the necessary IP information if you disable DHCP.
Network connection is unavailable. A red network symbol appears in the status bar on the main screen.	Inspect your network connection.

Camera Issues

Video from the camera appears in a small window on the main screen of the user interface above the **REDIAL** list. If no video from the camera appears, do the following:

- Ensure that the camera is properly connected to the Avaya codec as described in “Installing Avaya 1010/1020” on page 9. Only Avaya Video Camera 100 and Avaya Video Camera 150 are supported with Avaya 1010/1020.
- Verify that the blue LED on the front of the camera is lit and not blinking, indicating that power is active.
- From the main screen of the user interface, press on the Avaya remote control to access the **System Menu**. Press to access page 2 of the **System Information** page. Ensure that the status of the camera is **Ready**.

Improving a Dim Image

If the image appears too dim, you can adjust the **HD Camera Brightness** preference in **User (or Administrator) Preferences : Diagnostics : High Definition Camera**. You can also add a light source to improve the subject’s illumination. Refer to “Room Configuration” on page 4 for more information.

Status Icons

The following table identifies the icons that can appear in the system status bar.

Icon	Condition
	Indicates that the communication subsystem is initializing. If this icon reappears after the system has booted, a problem has occurred. Reboot the system.
	Indicates that the system is initializing. When the system is initializing, functionality on the main screen is disabled and no entries appear in the REDIAL list. This icon also appears when a new device is connected to the system after the system boots and disappears when the device is ready. If the icon persists, a problem has occurred and rebooting the system is necessary.
	Indicates that the system does not have an active microphone. Check the device's connections and then check the option you selected for the **Active Microphone** preference.
Network Status	Identifies the network status, as follows: connected (green indicator) in progress (yellow indicator) disconnected (red indicator)
System Overheating	This yellow indicator warns you when the system temperature is above normal operating temperature. The codec adjusts fan speed automatically to cool itself. This red indicator warns that the system is overheated and approaching the maximum allowed operating temperature and will automatically reboot after reaching it. **Warning:** Temperatures that require the codec to reboot can permanently damage codec components. Ensure the room that houses the codec is properly ventilated and temperature controlled.